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ABSTRACT

This study examines and describes current statistical programs in the field of library and information science, identifies areas of the National Commission's program that are dependent on quantitative data, compares the current statistical programs with projected new needs, and specifies areas that must be developed in a future national statistical program. Recommendations for action by NCLIS close the report, and ten references are listed in addition to the statistical studies cited throughout the paper. (RAA)

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NATIONAL PROGRAM FOR LIBRARIES
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QUANTITATIVE DATA REQUIRED TO SUPPORT AND IMPLEMENT
A NATIONAL PROGRAM FOR LIBRARY AND INFORMATION SERVICE

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Examines and describes current statistical programs in the field of library and information sciences, identifies program areas dependent on quantitative data and specifies areas which must be developed in a future national statistical program. Included in the paper are recommendations for possible action by the National Commission on Libraries and Information Science which, if implemented, would help assure quantitative knowledge which is timely, accurate, reliable, and comparable.

JULY 1977

The views expressed are those of the author and do not necessarily reflect the position or policy of the NCLIS. Though related to the Commission's National Program, papers in this series are not an integral part of the National Program Document.

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Introduction

"Until you can measure something, you can know nothing about it."

—Lord Kelvin

Although it is possible to measure something and still not know much about it, our society including schools and libraries could scarcely function today without access to substantial amounts of statistical data. The amount of data relating to planning, collecting, publishing, disseminating, and using library data is in itself impressive.

This paper is limited to the following charge from the National Commission on Libraries and Information Science:

- (1) To examine and describe current statistical programs in the field of library and information science;
- (2) To identify in the National Commission's program those program areas which will depend on quantitative data for their implementation and continuation; and
- (3) To compare the current statistical programs with projected new needs and to specify the areas which must be developed and expanded in a future national statistical program.

The first part of this study will be concerned with describing the current statistical collecting and publishing programs in the fields of library and information science. The primary sources for this section is the "Herner Report"* and publications of the National Center for Education Statistics (NCES).

The second part deals with a description of statistical information which the writer believes is essential to continue specific program objectives set forth by the National Commission on Libraries and Information Science (NCLIS) which will be identified and discussed.

The last section compares and evaluates the current library statistics programs in the light of projected data for NCLIS's program objectives. The concluding section provides recommendations for NCLIS action.

* National Inventory of Library Statistics Practices, U.S. Department of Health, Education, and Welfare, Office of Education, 1974. (74-188).

I. Current National Library/Information Science Data Collecting and Publishing Programs

Traditionally, the total universe of libraries has been divided into academic, public, school and special libraries. It is the latter category which is still undergoing some definition and clarification.

The current national library statistical collecting and publishing programs seem impressive, but is partly deceiving because some of the published information is lacking in accuracy, comparability and reliability. In collecting and distributing library statistics two classes of organization are involved:

- (1) Governmental agencies, and (b) Non-governmental bodies.

A. Governmental Agencies

Local, Federal and state agencies collect library data for four reasons:

- (1) They are required by law, such as for fiscal accountability in federally funded projects; for certification; and for census purposes.
- (2) They are required by NCLIS in fulfillment of their legislative mandate:

Sec. 5. (a) The Commission shall have the primary responsibility for developing or recommending overall plans for, and advising the appropriate governments and agencies on, the policy set forth in section 2. In carrying out that responsibility, the Commission shall--

- (1) advise the President and the Congress on the implementation of national policy by such statements, presentations, and reports as it deems appropriate;
- (2) conduct studies, surveys, and analyses of the library and informational needs of rural areas, or economically, socially, or culturally deprived persons, and of elderly persons, and the means by which these needs may be met through information centers, through the libraries of elementary and secondary schools and institutions of higher education, and through public, research, special, and other types of libraries;
- (3) appraise the adequacies and deficiencies of current library and information resources and services and evaluate the effectiveness of current library and information science programs. (P.L. 91-345.)

- (4) They are part of a governmental service to citizens who need the information to transact their business or service, e.g., as a measure of the market for publishers, media producers, and library suppliers; as guidelines to city and state administrators concerning the quantity and quality of library services.

Since local and state library statistical surveys are by definition non-national, the focus here will be on those Federal agencies that collect and publish national library data. Of the dozen or so Federal bodies involved, one--the National Center for Education Statistics (NCES)--stands out because only this agency collects generally usable national library data.

Since other governmental agencies, such as the National Science Foundation, the U.S. Government Printing Office, the National Library of Medicine, and the Bureau of Census are constrained in their collecting activities, this section will be devoted to NCES and its activities.

Before establishment of NCES, the U.S. Office of Education was the Federal body responsible for collecting and disseminating educational statistics during the period 1867-1965.

The National Center for Education Statistics

The National Center for Education Statistics (NCES) was originally established in 1965 as a division of the U.S. Office of Education. As one of the major statistical centers of the Federal Government, NCES gathers, stores, analyzes and disseminates educational statistics. The Learning Resources Branch of NCES plans and carries out those responsibilities for library, museum and media statistics.

Public Law 93-380 enacted August 21, 1974, redefined the mission of NCES and identified several mandated reports:

In addition to data collection and dissemination, requirements were established regarding the analysis of the meaning of educational data, international statistics, and the assistance of state and local agencies for improving and automating statistical data collection activities. 1

In 1970, NCES published a significant report entitled, Planning for a Nationwide System of Library Statistics. The nine major recommendations are still valid; they are:

- (1) Planning for standardized, meaningful library statistics must continue indefinitely.

1. Library Trends, July 1976, p. 83.

- (2) Standardized terminology must be achieved by the library profession and promulgated by the U.S. Government.
- (3) The National Center for Education Statistics should be assisted by an advisory committee which represents fairly the numerous governmental, professional and commercial interests in library statistics.
- (4) The nationwide system should be a shared responsibility between NCES and the states.
- (5) Federal financial assistance to the states to enable them to carry out their responsibilities in the nationwide system is mandatory.
- (6) The determination of library universes should take place at the state level according to definitions supplied by NCES.
- (7) Training programs are essential both at the state and local levels for general understanding, accuracy and compliance.
- (8) States should be encouraged to collect data beyond Federal and national needs and should distribute these data widely.
- (9) A national data bank system of library statistics should be established which would allow for speedy retrieval of library data at cost.

Some of these recommendations have been implemented or are in the process of being implemented (such as numbers 1, 2, 3, 4, 9). Most significantly, the Palmer report provided the blueprint for the national library statistics program known as LIBGIS (Library General Information Survey).

With the cooperation of the American Library Association (ALA) and other organizations interested in library statistics, NCES is implementing a national library statistics program of great promise. The aims of the LIBGIS system are:

- (1) To make available uniform statistics of improved reliability, timeliness, and usefulness to agencies at all levels and to other interested users and administrators.
- (2) To promote improved standards of library reporting at all levels.

- (3) To obviate or diminish numerous requirements for special purpose and frequently duplicated data collection activities. 2

The success of the LIBGIS system rests on the propositions that there are certain data elements common to all types of libraries (hence, accurate, uniform, national statistical data are collectable regardless of the type of library being surveyed) 3 and the collecting of library statistical data must be a shared responsibility among NCES and appropriate state agencies.

"The states occupy an important role in the system because it is recognized that coordination of data collection activities at the state level is essential for the collection of accurate data." 4

In the LIBGIS scheme, four data elements are accepted as common to all types of libraries; these data are compiled as follows:

- (1) Collection. Bookstock is counted both by volume and by title: and by physical unit. Periodicals are counted both by number of bound volumes and number of titles. Microforms are counted by titles represented by books/periodicals and by physical unit when the former is not feasible. Audiovisual materials and all other types of materials (filmstrips, maps, study prints, etc.) are counted by title.
 - (2) Operating expenditures. Figures for total expenditures are broken down into subtotals for salaries/wages, books, periodicals, audiovisual materials, etc.
 - (3) Staff. Staff members are counted as full-time, part-time, and full-time equivalents with identification by sex and education for each category.
 - (4) Development areas (Library Service). These elements attempt to measure three "outputs"--interlibrary loan transactions, physical facilities, and number of hours/days per typical week the library is open.
- 2 A thorough review of the development of the LIBGIS system is set forth in Library General Information Survey (LIBGIS) State Participation and Development, Final Report, prepared by Alphonse F. Trezza and Barbara Slanker, DHEW, May 14, 1974.
 - 3 Such data elements are called "LIBGIS core items." Data elements unique to each type of library can also be collected to provide comparability among libraries of the same type. Such unique data elements are termed "academic components," "public library components," etc.

NCES is conducting since 1974 statistical surveys of libraries with two major components: the LIBGIS core items common to all types of libraries, and the library components peculiar to the various types of libraries. Since the second component does not yield comparable statistical data for all types of libraries, its usefulness for national planning purposes is somewhat more limited. It is essential that the unique data elements remain as far as possible compatible with the LIBGIS core items. The various types of libraries will find their unique data elements valuable for planning, evaluation, budgetary management, and related uses.

Surveys are conducted on a sample or universe basis. In 1974 NCES conducted a sample survey of 3,500 public school libraries/media centers selected from a universe of nearly 87,000 public schools; and a sample survey of 1,500 public libraries, out of over 8,700. In 1975, 1976, and 1977 it surveyed all 3,100 academic libraries.

The sample surveys are conducted to decrease costs and response burdens. The public library survey is actually a universe survey of all systems serving populations of 100,000 and over; the sampling ratio decrease as the areas of service decreases.

The success of LIBGIS depends on the degree of cooperation NCES receives from the state library agencies. These state agencies are hopefully: (1) distributing and collecting NCES library forms; (2) editing the forms; and (3) forwarding edited forms to NCES for final edit and processing. NCES will place the data on tapes, EDSTAT (Educational Statistics Information Access System) can be interrogated by users (anywhere in the continental United States) through standard keyboard-type computer terminals. In addition, NCES plans to publish the results as promptly as possible.

NCES realizes that Congress and Federal agencies such as NCLIS, the U.S. Office of Education, CONTU, the National Libraries, as well as state library agencies and individual libraries and library associations, require prompt and complete related data. To expedite these needs, Congress shifted in 1974 (August) NCES from the Office of Education to the Office of the Assistant Secretary of HEW. A statutory advisory council has the functions of relating NCES programs to the needs of users of education and library statistics.

NCES will have to develop new approaches to obtain reliable data for NCLIS, the U.S. Office of Education, CONTU, state library agencies, individual libraries, library associations, and national libraries, since not all states will cooperate equally in conducting library surveys (particularly in the area of school or special libraries).

To be useful data should be made promptly available. The chief reason for delays is the dependence of NCES on contracting out all surveys and of GPO actually for contracting even publishing. To bridge the time gap,

NCES should probably have some inhouse capabilities to expediate the availability of urgently needed data and the production of tapes and publications. Since we are not aware of the size of NCES budgets, we can assume that fiscal and manpower restraints account for delays. In the meantime, users (including Congress) will continue to experience frustrations. Possibly an inquiry into NCES funding and allocation of library staffing and budgeting would provide insights into possible speedup possibilities for library data.

The following pages indicate the area of library data which are available from NCES.

(1) Public Library Statistics

Data are collected on library holdings, loan transactions, staff, income and expenditures. Prior to the 1971 survey, no distinction was made between public libraries and non-consolidated public library systems (i.e., public library systems composed of two or more locally autonomous libraries). The 1974 survey includes the LIBGIS core items on collections, operating expenditures, staff and library service. The following publications either have been issued or will be:

- 1960 Statistics of Public Library Systems Serving Populations of 100,000 or More: Fiscal Year 1960. (OE-15033), 1961, 24pp.
- 1960 Statistics of Public Library Systems Serving Populations of 50,000 to 99,999: Fiscal Year 1960. (OE-15034). 1962, 23pp.
- 1960 Statistics of Public Library Systems Serving Populations of 35,000 to 49,999: Fiscal Year 1960. (OE-15035). 1962, 23pp.
- 1962 Statistics of Public Libraries, 1962. Part 1, Selected Statistics of Public Libraries Serving Populations of 35,000 and Above: Institutional Data (OE-15051). 1965, 47pp.
- 1962 The 1962 data for public libraries serving populations of less than 35,000 was published by the University of Illinois Graduate School of Library Science in 1966 under the title 1962 Statistics of Public Libraries Serving Populations of Less than 35,000.
- 1965 Statistics of Public Libraries Serving Communities With at Least 25,000 Inhabitants, 1965. (OE-15068). 1968. 65pp.

- 1968 Statistics of Public Libraries Serving Areas With at Least 25,000 Inhabitants, 1965. (OE-15068). 1970, 144pp. Available on computer tape.
- 1971 Statistics of Public Libraries Serving Areas with at Least 25,000 Inhabitants, Fiscal Year 1971. Publication expected for 1975. Available on computer tape.
- 1973 Public Library Universe Survey. Completed in 1974. Publication expected for 1976.
- 1974 A survey of public libraries, 1974 is in data processing phase. (LIBGIS I)

(2) Public School Library/Media Center Statistics

Data have been collected on library collections, staff and expenditures of selected school library districts. The 1974 survey consists of a sample of 3,500 individual school library/media centers of a universe of about 87,000. This survey will include data on loan transactions, physical facilities and hours that the library is open per typical week (LIBGIS core items). The following reports have been published or will be:

- 1960 Statistics of Public School Libraries, 1960-61: Part I, Basic Tables. (OE-15049). 1964, 90pp.
- 1960 Statistics of Public School Libraries, 1960-61: Part II, Analysis and Interpretation. (OE-150056). 1965, 13pp.
- 1962 Public School Library Statistics, 1962-63. (OE-15020-63). 1964, 21pp.
- 1974 A survey of public school libraries/media centers, 1974 (LIBGIS) is in data processing phase.

It should be pointed out here that data about private school/library media centers are badly needed; as yet, NCES has no plans to provide such data.

- (3) The universe of special libraries is being developed. For those libraries it has identified as "special," NCES has collected statistical data on collections, staff, expenditures and user populations.

The following reports have been published:

- 1963-64 Special Libraries Serving State Governments, 1963-64.
Available as ERIC document ED 013 374 from ERIC Document
Reproduction Service, P.O. Drawer O, Bethesda, Maryland
20014.
- 1965 Survey of Special Libraries Serving the Federal Government
(1965) (OE-15067). 1968, 108pp.
- 1972 Survey of Federal Libraries Fiscal Year 1972. (NCES 75-
184) 1975, 238pp.

During fiscal year 1976 the following surveys as part of LIBGIS II
were initiated and contracted for by NCES:

- (a) Survey of special libraries in commerce and industry. Contractor:
Special Libraries Association. The purpose of this first time
short survey is to identify the total survey universe (estimated
to be between 5,000 and 6,000) and to collect information on a
dozen data items regarding collections, acquisitions, users, staff
and expenditures.
 - (b) Survey of special libraries serving state governments. Contractor:
Ohio State Library. The universe is estimated to be about 2,500;
this survey is a follow-up to the published 1963-64 survey listed
above.
 - (c) Survey of state library agencies. Contractor: Florida State
Library. A first time survey for collecting data on the State
Library Agencies and their libraries.
 - (d) Survey of library cooperatives, consortia and networks. Contractor:
Value Engineering Co., Arlington, Virginia. The purpose of this
study is to collect data both on the impact of the new educational
technology and computerization on libraries and information centers
and the results of some Federal legislation (Library Services Act,
Title II of HEA, and Title II of ESEA) which helped to establish
networks, consortia and related organizational groupings on the
national, regional and state levels. At present, these networks
are spreading and interconnecting, forming linkages with Federal
installations. No statistical study of these operations exists
nationally or regionally; only state networks have been studied in
some detail.
- (4) College and University Library Statistics

The oldest uninterrupted series of surveys of the National Center
for Education Statistics which provides national and institutional
data on expenditures, staff, space, collections and salaries of
librarians of institutions of higher education. The following
reports have been published:

- 1960 Library Statistics of Colleges and Universities, 1959-60: Institutional Data. (OE-15023). 1961, 79pp.
- 1960 Library Statistics of Colleges and Universities, 1959-60: Analytic Report. (OE-15031-60). 1962, 45pp.
- 1961 Library Statistics of Colleges and Universities, 1960-61: Institutional Data. (OE-15023-61). 1962, 89pp.
- 1962 Library Statistics of Colleges and Universities, 1961-62: Institutional Data. (OE-15023-62). 1963, 1972pp.
- 1962 Library Statistics of Colleges and Universities, 1961-62: Analytic Report. (OE-15031-62). 1964, 70pp.
- 1963 Library Statistics of Colleges and Universities, 1962-63: Institutional Data. (OE-15031-63). 1964, 120pp.
- 1964 Library Statistics of Colleges and Universities, 1963-64: Institutional Data. (OE-15023-64). 1965. 1962pp.
- 1964 Library Statistics of Colleges and Universities, 1963-64: Analytic Report. (OE-15031-64). 1968. 48pp.
- 1966 The American Library Association, with a grant from the Office of Education, published an institutional report, Library Statistics of Colleges and Universities, 1965-66.
- 1967 Library Statistics, 1966-67: Preliminary Report on Academic Libraries. (OE-15065). 1967, 38pp.
- 1967 Library Statistics of colleges and Universities: Data for Individual Institutions, Fall 1967. (OE-15023-67). 1969, 346pp.
- 1968 Library Statistics of Colleges and Universities: Data for Individual Institutions, Fall 1968. (OE-15023-68). 1969, 172pp.
- 1969 Library Statistics of Colleges and Universities: Analytic Report, Fall 1968. (OE-15031-68). 1970, 82pp.
- 1969 Library Statistics of Colleges and Universities: Data for Individual Institutions, Fall 1969. (OE-15023-69). 1970, 158pp.
- 1969 Library Statistics of Colleges and Universities: Analytic Report, Fall 1969. (OE-15031-69). 1971, 81pp.

- 1971 Library Statistics of Colleges and Universities: Institutional Data, Fall 1971, Part A Basic Information on Collections, Staff and Expenditure. (OE-72-103). 1972, 247pp.
- 1971 Library Statistics of Colleges and Universities: Institutional Data, Fall 1971, Part B Basic Information on Collections, Staff and Expenditure. (OE-72-189). 1972, 146pp.
- 1971 Library Statistics of Colleges and Universities, Analytic Report, Fall 1971, Part C. (OE-74-11417). 1973, 70pp.
- 1973 Library Statistics of Colleges and Universities: Institutional Data, Fall 1973. 1976.
- 1975 Library Statistics of Colleges and Universities: Institutional Data, Fall 1975. (NCES 77-206) 1977, 397pp.
- 1977 A survey of college and university libraries is being planned as a supplement to LIBGIS II.

In addition, the surveys of 1967, 1968, 1969 and 1971 are available on computer tape.

(5) Library Education and Manpower Statistics

The first survey of library education programs was issued in 1964; the latest survey covers 1972-73. All known institutions which offer programs in library science (2-year, 4-year and post-bachelor's) are included with nearly complete statistical data on enrollments, expenditures, faculty, salaries, degrees awarded and placement. These studies are as follows:

- 1960 Library Manpower, Occupational Characteristics of Public and School Librarians. (OE-15061). 1966, 30pp.
- 1964-65 Library Education Directory, 1964-65. (OE-15064). 1965, 32pp.
- 1964 "Survey of Library Education Programs, Fall 1964." Mimeographed OE release, issued in December 1965.
- 1966-68 North American Library Education Directory and Statistics, 1966-68. Survey conducted under Office of Education contract with the University of Wisconsin, Milwaukee, and the American Library Association. Chicago: American Library Association, 1968. 106pp.
- 1969-71 North American Library Education Directory and Statistics, 1969-71. Survey conducted under Office of Education contract with the University of Wisconsin, Milwaukee, and the American Library Association. Published by the ALA during winter 1971.

This and the previous study were funded by OE's Bureau of Libraries and Learning Resources.

1972-73 North American Library Education Directory and Statistics, 1971-73. Indiana University Graduate Library School, 1974. An update of valuable directory is badly needed.

1972 Library Manpower: A Study of Demand and Supply. Conducted for NCES and Division of Library Programs of the Office of Education by the Bureau of Labor Statistics. 1975.

This publication describes the number of working librarians and paraprofessionals and in what types of library they are working as of 1970. The most useful portion consists of projected growth in employment and professional library degrees through 1985.

In sum, the totality of these surveys is impressive; however, a few difficulties remain to cloud the picture. For one thing, great amounts of data are published until long after the surveys are conducted. Secondly, even when data are available on computer tape at nominal costs, potential users neglect taking advantage of their accessibility. Thirdly, some useful data are not collected at all but should be. These data will be identified in Part III.

The single most important aspect of the LIBGIS program of NCES is that of Federal-state cooperation and data sharing. The results of these library surveys are used by the national government and each state can use these same data to compare itself with the national total and other states. Furthermore, vital statistical data are available on individual libraries which can be used for a variety of purposes.

B. Non-Governmental Agencies

Four principal non-governmental agencies are involved in the collecting of library data: (1) private networks or consortia such as the center for Research Libraries (CRL), the Ohio College Library Center (OCLC), the New England Library Network (NELINET), etc.; (2) professional organizations such as the Medical Library Association (MLA), the Association of American Library Schools (AALS), the American Library Association (ALA), the Association of Research Libraries (ARL), the National Catholic Education Association (NCEA), the American Association of Law Libraries (AALL); (3) accrediting bodies such as the Accrediting Association of Bible Colleges (AABC), the Committee on Accreditation of the American Library Association (COA), the United Business Schools Association (USBA), the National Council for Accreditation of Teacher Education (NCATE), the National Association of Trade and Technical Schools (NATTS), the North Central Association of Colleges and Secondary Schools (NCACS), etc.; private-for-profit enterprises such as R. R. Bowker, Gale Research Company, Association of American Publishers, Educational Media Producers Council, etc.

The amount of statistical information collected and made available by these various agencies range from the minute to the considerable. Nonetheless, all of them take the trouble for essentially one or more of the following five reasons:

- (1) For accreditation.
- (2) For the purpose of comparison and the development of standards.
- (3) For measuring library use, effectiveness, needs.
- (4) For library management purposes (budget justification, cost studies, planning, etc.)
- (5) For sale as reference tools.

Since the Herner Report has already done such a thorough job in describing current national library statistics programs collected by non-governmental agencies, it would be redundant to proceed in this direction. In any national library statistics program, the cooperation of all of these agencies is necessary to ensure that collected statistical information is comparable, accurate and reliable.

II. NCLIS Program Areas Which Require Reliable Statistical Data for Implementation

In its National Program for Library and Information Services, the National Commission on Libraries and Information Science sets forth eight program objectives. ⁵ In a preliminary statement to these objectives, the National Commission declares that it is firmly committed to the continuation of Federal categorical aid as part of the "National Program." Furthermore, this commitment is an inseparable component of objective one. The eight program objectives are as follows:

- "1. Ensure that basic minimums of library and information services adequate to meet the needs of all local communities are satisfied."

Achieving this goal requires quantitative standards--"standards of library service" equivalent to a "standard of living" periodically announced by the Bureau of Labor Statistics. Although there are considerable differences in defining quantitative standards for library service, the library community and the public it serves must soon arrive at some agreement.

⁵ A National Program for Library and Information Service. 2nd draft (Rev.), Washington, D.C., September 15, 1974, pp. 54-68.

The first step in this direction has been taken when NCLIS contracted for the production of the National Inventory of Library Needs which used the NCES data tapes of the 1974 School Library Media Center Survey, the 1974 Public Library Survey and the 1975 College and University Library Survey to indicate a need of resources, staff, expenditures and physical facilities.*

A second step will be the extension of this study into the area of Special Libraries in Commerce and Industry, Special Libraries Serving State Governments and Special Libraries Serving the Federal Government. Both of these studies are planned for use by the White House Conference on Library and Information Services and the preceding state library conferences. To complete this second phase would have required a survey of Special Libraries of National Organizations and Associations which NCES seems unable to envisage or to program.

What facilitates this matter was the determination of NCLIS to develop in this connection the commissions indicators of library needs. It is hoped that after the needs indicators are applied to the special libraries, they will be applied to intertype library systems and/or regional/local library systems.

With the inventory studies at their disposal, the National Commission can identify "basic minimums of library service" for collections, staff, facilities, and expenditures but not yet for service transactions. 6

Included in Objective I is the National Commission's commitment to a continuation of Federal categorical aid programs to libraries. Since a review and discussion of these efforts are discussed in R. Frase's report, The Future of Federal Categorical Library Programs (March 5, 1974), nothing needs to be added in this paper about these programs.

"2. Provide adequate special services to special constituencies, including the unserved."

The identification of special services to special constituencies has been partially met by the report, Library and Information Service Needs of the Nation: Proceedings of a Conference on the Needs of Occupational,

* National Inventory of Library Needs, 1975, National Commission on Libraries and Information Science, Washington, D.C., March 1977.

6 A step in the right direction is the recent publication of Media Programs: District and School, 1975, by the American Association of School Librarians and the Association of Educational Communication and Technology.

Ethnic, and Other Groups in the United States, 1974. The met and unmet needs of seventeen special groups (scientists, businessmen, labor, artists, aging, Mexican-Americans, etc., etc.) were discussed in detail. To complete the picture, the National Commission will need to translate these information needs into dollars and cents. How much will it cost to provide adequate "special services?" How much is being spent now?

Perhaps another approach will help in determining adequate special services, namely, investigating the information-seeking behavior or citizens, and how their information needs are being satisfied (or dissatisfied) outside of the constraints of existing library systems.⁷

"3. Strengthen existing statewide resources and systems."

Since this objective is inseparable from "Objective 8" it will be discussed there.

"4. Develop and continually educate the human resources required to implement a National Program."

Not everyone who works for libraries and information centers is a librarian or information scientist. In addition to librarians, there are secretaries, telephone operators, library aides, clerks, messengers, shelvees, typists, filers, keypunchers, custodians, etc. But whatever the job, the person must be qualified to fill it. How many qualified persons? Two current publications discussed earlier help answer that question: Library Manpower: A Study of Demand and Supply and North American Library Education Directory and Statistics, 1972-73.

Besides the figures for "how many" the National Commission requires statistical information in four areas: (1) innovative library education programs and an assessment of their successes or non-successes; (2) continuing education programs; (3) recruitment; and (4) job placement. These data should help provide appropriate information on whether or not the staffing and training needs of libraries and information centers are being adequately met. The Continuing Library Education Network and Exchange Agency (CLENE) should be able to provide NCLIS with information on continuing education programs especially.

"5. Coordinate existing Federal programs of library and information service."

Like "Objective 3" this Objective is more suitably discussed under "Objective 8."

⁷ Two recent studies in this area are listed in the bibliography. See Gee and Warner.

- "6. Make the private sector an active partner in the development of the National Program."

There are all sorts of possible required statistical data for implementing this Objective. The Special Library Surveys of NCES fall into this area. To complete the data collection of Special Libraries initiated in 1976 would be a Survey of the Special Libraries Serving National Associations and Organizations and the collection of data of larger independent research libraries such as John Crerar and Linda Hall. These dozen libraries could usefully be incorporated into the next public library survey. However, there are a number of sensitive policy decisions which need to be resolved first. What about copyright? And user charges? Library fees to authors? Photocopying in libraries?

It surely would be useful to know, for example, how much the "information industry" is dependent on library business and what type of user would be willing to pay for information received--and how much. 8

If and when NCES or NCLIS joins NTIS (the National Technological Information Service of the department of Commerce) and charge for every copy of printed or microformed reports this question will be answered.

As an indication of some feeling regarding "free information," Hotline reports that Paul Zurkowski, Executive Secretary of Information Industry Association, made these statements in a speech in New York:

"From SUNY on Lake Erie to NLM in Bethesda and the Research Triangle in North Carolina to the Golden Triangle in Pittsburgh, an Iron Curtain forged out of Free Information is descending across the competitive marketplace of ideas. Just as surely as the Berlin Wall stands today, in the absence of a concerted industry-wide effort, users' choices in information one day soon will be replaced by 'free information' from one source. The deadening effect of generosity of Big Brother will impose perhaps not an iron curtain, but certainly a wet blanket on creativity, choice, and the competition of ideas this nation needs to function. ...the prospects you face in an atmosphere poisoned by indiscriminate anti-business campaigns and the myopic conventional wisdom that because information is good for you, it should be free." 9

8 Some significant data was disclosed in a survey published in Publishers' Weekly, June 16, 1975, entitled, "The Library Market; a special Publishers' Weekly survey," pp. 41-68.

9 Hotline, April 7, 1975, p.1.

Nonetheless, libraries and information industry/publishers are really allies not adversaries.

- "7. Establish a locus of Federal responsibility charged with implementing the national network and coordinating the National Program under the policy guidance of the National Commission."

The NCES survey of Cooperatives, Consortia and Networks initiated in 1976 (and to extend over a two-year period) will provide the first reliable data base. However, this objective requires also decisions based on other than quantitative considerations, such as widely accepted principles of participatory management.

- "8. Plan, develop and implement a nationwide network of library and information service."

Achieving a workable and effective nationwide network of library and information service is the capstone of the seven other objectives. Among other things, a nationwide network would automatically strengthen existing statewide resources and systems (Objective 3), particularly for those states whose informational resources are lacking in depth and variety. Part of the NCES Network Study is to provide an up-to-date Directory of Network type organizations. However, the establishment of a nationwide network would require the coordination of existing Federal programs of library and information service (Objective 5).

Furthermore,

Reliable and valid data can contribute significantly to the planning and implementation of programs of library cooperation. Data will always be merely a tool, however. The key to the success of library cooperation lies in the participants themselves--in the support they provide and in their determination to make the program succeed. 9a

Thus, to plan, develop and implement a nationwide network necessitates mobilizing widely scattered statistical data and collecting required new data. A description of required statistical data is set forth in Part III.

9a Anders, Mary E. "Statistical Information as a Basis for Cooperative Planning." Library Trends, v. 24, no. 2 (October 1975), p.241.

III. Comparison of Current Statistical Programs With Projected Statistical Needs Based on NCLIS Program Objectives; Recommendations

In order to arrive at recommendations concerning specific requirements, the following components are essential:

- (1) Information needs are a national concern. The National Commission has stated that all Americans need information equally, regardless of location. While local information can frequently be met with local resources, at times, access to national resources is the only solution to "local" needs.
- (2) Frequently the most efficient means to meet information needs is a shared Federal-state-local fiscal responsibility; this includes sharing and exchanging of resources; and possibly sharing of staff.
- (3) Information to legislative bodies, who may be considering enacting library legislation and appropriating budgets for library programs, will be one of many uses made of national library statistics.

This assumption is necessary to exclude legitimate demands, of other library statistics users. Library administrators, consortia and networks and the private sector require library statistics; NCLIS certainly cannot be expected to provide them but should consider its mandated legislative responsibility in representing these users in its discussions with and recommendations to NCES.

- (4) Statistical data are needed by the National Commission for planning. The forthcoming White House Conference on Library and Information Services (and the state conferences) will require appropriate statistical information supplied by NCLIS, as mentioned already above.
- (5) The study of currently collected and published national library statistical data demonstrates that these data are primarily of inputs--they numerically describe a library's resources, staff and expenditures. However, they provide less sufficient data regarding (a) the services libraries provide to users, and (b) up to now no data to operate libraries more effectively. (Usually referred to as internal management data.)

Four library measures--collections, staff, physical space and operating expenditures have been used to assess adequate library service. These are valuable and useful data, but they do not provide measures of library services.

The National Commission is responsible (among other things) for appraising..."the adequacies and deficiencies of current library and information resources and services and evaluating the effectiveness of current library and information science programs." Appraising library services requires collecting more library output measures than those previously collected, namely, (1) library loan transactions; and (2) library hours. At least three additional measures are now beginning to be collected:

- (3) Number of reference contacts.
- (4) Number of users in a library during a typical week.
- (5) Number of items used in a library during a typical week.

Starting with the LIBGIS II Surveys of 1976, these user related data are beginning to be included in the new NCES Surveys.

It may also be useful to determine the cost of a "service transaction" in order to relate benefits to costs.

Three areas remain to be discussed: Minimums of Library Service; Comparisons between current and more adequate library services, and projected expenditures for eliminating the gap between present library services and minimums of Library Services.

- A. Minimums of Library Service--Various meanings of the term "standard have been discussed elsewhere. ¹⁰ It is agreed that quantitative measures of minimum library service must be adopted nationally as developed in Boyd Ladd's, National Inventory of Library Needs, 1975: Resources Needed for Public and Academic Libraries and Public School Library/Media Centers. (1977) Ladd used the term "Index of Needs," but he really developed national guidelines approaching standards. His index can be defined as a level of performance expressed in quantitative terms regarding staff, resources, space, expenditures. This yardstick can be used to determine how well a library is providing information services to its respective community and has a built-in mechanism for updating. *

Still to be measured are the information needs of larger constituencies--such as the economically disadvantaged, the less educated and the handicapped. We need to know who they are, where they are, what they need, how fast they need it, and the value--to them and

¹⁰ See e.g., Library Planning and Decision-Making Systems. MIT Press, 1974. p. 37-38.

* as handled by ANSI/Z39 for the U.S.

to society--of improving their access to information and knowledge. To quantifying these unmet needs is extremely difficult and should be considered for solution by ANSI/Z39 possibly with the help of NCLIS and the White House Conference.

- B. Comparison Between Current and More Adequate Library Services--
To establish the need for sufficient funding, it is essential for the National Commission to demonstrate whether a gap exists between current and minimum adequate library services. The best means for determining this gap is the national inventory of library needs completed by Boyd Ladd.

To expand this concept, it would be important in future surveys which are conducted by sample to provide comparable Inventory studies on a state-by-state level.

This would also require that the NCES studies conducted on a sample basis be changed from a national to a state sample.

Ten years ago the American Library Association published a National Inventory of Library Needs, which indicated the discrepancy between standards and the actual conditions of American Libraries.¹¹ This document was a major factor for Congress to consider and develop new library programs.

Since the White House Conference on Library and Information Services (scheduled for September 1979) will be preceded by 50 state conferences, it is encouraging that some data in the latest National Inventory of Library Needs will be published for five states.

- C. Projected Expenditures for Eliminating the Gap Between Present Library Services and Minimums of Library Services

The gap between required minimums and current library services should be considered by the National Commission when planning a national network of library and information service.

A further assistance in this area are the materials price indexes which include now hardback books and paperback books; and are expected to include newspapers and loose leaf services. In addition to the price indexes for books, serials and microforms bought by libraries, several others are now being developed--

¹¹ U.S. Office of Education. National Inventory of Library Needs. American Library Association, Chicago, 1968.

filmstrips, computer service costs, educational motion pictures, film loops, etc. There is also the need to develop several index measures or ratios of library use, such as a ratio of circulation to holdings and a ratio of successful service transactions to the number of personnel. ¹² Such developments may take time, but these data will be useful for planning purposes.

A potential source of statistical support may be obtained from the Office of Planning, Budget and Evaluation (OPBE) of the U.S. Office of Education. Among the responsibilities of this Office is that of assessing the impact of Federal aid programs administered by the parent agency. The National Commission may want to work in concert with OPBE in developing studies which prove mutually beneficial. At present OPBE is conducting a study on library networks and cooperation.

Recommendations

To summarize the suggestions and recommendations, it is urged that:

- (1) The National Commission work with NCES and OPBE in strengthening and expanding current library statistics programs which provide national, state statistics of value in planning a national information network. This will require an understanding with NCES on a minimum program, which would consist of the following elements:
 - (a) That the surveys of academic, public and non-public school library media centers and public libraries be conducted every 2-3 years.
 - (b) That surveys of special libraries serving--
 - (a) commerce and industry
 - (b) national organizations and associations
 - (c) the Federal Government
 - (d) the state governmentsbe conducted every 3-4 years.
 - (c) That surveys using samples be expanded to provide not only national but also state data for the states requesting them.
 - (d) That studies dealing with (a) manpower and (b) terminology and (c) networks be conducted every 4-5 years.

¹² For example, a useful index in the past was the "index of American public library circulation" which appeared with some regularity in the ALA Bulletin.

If this assistance does not seem obtainable, the National Commission may consider legal steps either to transfer library statistics to their own jurisdiction, or to the Bureau of Libraries and Learning Resources, or to the Library of Congress, the major U.S. National Library.

- (2) A functioning national library statistics data bank consisting of both LIBGIS core items and particular type of library components is essential for planning, budgeting and forecasting purposes. Obviously, these data bases can be manipulated in a wide variety of ways which are not possible from printed tables. Correlations can be produced with appropriate economic and social data elements which are also available on computer tape. EDSTAT II, the NCES data bank, plans to make available future library surveys for purchase on computer tape in a standardized format. In addition, steps are being taken to provide remote access to the data base by terminals scattered throughout the nation. All of this is encouraging, but NCES is still extremely slow in supplying the latest statistical information. Congress and the information community need statistical data which are up to date.
- (3) Standardization of terminology and the identification of the library universe is necessary in order to produce reliable, comparable and accurate statistical data.
- (4) The development of quantitative measures for minima of adequate service would provide strong evidence on behalf of library assistance programs.
- (5) The development of measures of library "use indexes" would enable the information and library community to evaluate the effectiveness of library service.
- (6) The design and collection of relevant statistical data about the private sector (knowledge industries) would greatly assist in defining its role in a national network.

It cannot be emphasized too strongly that an effective national information network will be supported and strengthened by quantitative knowledge which is timely, accurate, reliable and comparable.

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